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| Lesson Title: | | Glogster | | | | | | | | | |
| **Teacher:** | Santoro | | **Hour:** | | Science Period 1 | | | | | | |
| **Week:** | Last week in Trimester 2. 1st week in trimester 3 | | **Date:** | | Trimester 2-3 (March 7th-14th) | | | | | | |
| **Unit:** | Earth Systems | | **Target Grade Level:** 6th | | | | | | | | |
| **Course:** | Science | |  |  | |  |  |  |  |  |  |

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| **Learning Target(s):** | Complex interrelationships exist between earth’s structure and natural processes that over time are both constructive and destructive. |
| **Criteria for Success:** | I can gather, analyze, and communicate evidence based on the Earth’s constructive and destructive forces.  I can gather, analyze, and communicate evidence that explains the formation of Earth’s surface features. |
| **Progression of Learning:** | -Practice the collaborative inquiry process that scientists use to identify local evidence of Earth’s constructive and destructive processes.  -Create and compare models that show how natural processes affect Earth’s structures.  -Create models of water circulation and distribution patterns on Earth.  -Students individually set up Glogster accounts, under my (teacher) account. I gave each student a nickname (username) and a password to use.  - Students created own web-page using Glogster and rubric given to them.  -Teacher guided students at beginning, and then students guided each other and self assessed according to rubric.  -Student’s problem solved throughout project. |

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| **Content Area Standards, Essential Learnings, and Evidence Outcomes** | **21st Century Skills and Abilities** | **ISTE NET-S, ITEEA, or L4L Standards Addressed** |
| Standard 3 – Students know and understand the processes and interactions of Earth’s systems and the structure and dynamics of Earth and other objects in space.  Earth Systems  3.1 Complex interrelationships exist between Earth’s structure and natural process that over time are both constructive and destructive.  a. Gather, analyze, and communicate an evidence-based explanation for the complex interaction between Earth’s constructive and destructive forces. b.Gather, analyze and communicate evidence from text and other sources that explains the formation of Earth’s surface features.  c.Use or create a computer simulation for Earth’s changing crust.  3.2 Water on Earth is distributed and circulated through oceans, glaciers, rivers, ground water, and the atmosphere.  a. Gather and analyze data from a variety of resources and investigations to account for local and world-wide water circulation and distribution patterns.  b. Use evidence to model how water is transferred throughout the Earth. | * Collaboration and Teamwork * Critical Thinking, Reasoning, and Problem Solving * Invention, Innovation, and Creativity * Self-Direction * Information Literacy * Global Awareness * Inquiry Questions * Relevance and Application * Nature of Discipline | Standard 1: Creativity and Innovation- Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.   1. Apply existing knowledge to generate new ideas, products, or processes. 2. Create original words as a means of personal or group expression. 3. Use models and simulations to explore complex systems and issues.   Standard 3: Research and Information Fluency- Students apply digital tools to gather, evaluate, and use information.   1. Plan strategies to guide inquiry. 2. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. 3. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks.   Standard 4: Critical Thinking, Problem Solving, and Decision Making- Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tolls and resources.  b. Plan and manage activities to develpp a solution or complete a project.  c.Collect and analyze data to identify solutions and/or make informed decisions.  Standard 5: Digital Citizenship- Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.   1. Advocate and practice safe, legal, and responsible use of information and technology. 2. Exhibit a positive attitude towards using technology that supports collaboration, learning, and productivity. 3. Demonstrates personal responsibility for lifelong learning. 4. Exhibits leadership for digital citizenship.   Standard 6: Technology Operations and Concepts- Students demonstrate a sound understanding of technology concepts, systems, and operations.   1. Understand and use technology systems. 2. Select and use applications effectively and productively. 3. Troubleshoot systems and applications. 4. Transfer current knowledge to learning of new technologies. |

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| **Pre-Assessment Summary** |  | **Post-Assessment Summary** |
| Earth Systems quiz and test.  The quiz was given before the Glog project was assigned, so that the students have already mastered constructive and destructive forces, and evidence of earth’s surface features.  The test was given during the Glog project. The purpose of the Glog was for students to review Earth systems terms before the test, and construct responses for after their test.  Before the Glogster assignment was given, students became familiar with my website santorosciencerocks.pbworks.com. They had several other assignments that they needed to refer to my website for. These other assignments were also part of my pre-assessment, in that I figured out how familiar my students were with navigating around a website.  Here are their directions prior to setting up their Glog accounts:  **Directions for examples on santorosciencerocks**  Log into your team Gmail accounts  Click on the message that says [stacie.santoro@eagleschools.net](mailto:stacie.santoro@eagleschools.net)  Click on the blue/black words that say Join the Workspace  Click on the tab Home  Click on the website in blue santorosciencerocks.pbworks.com  You should see purple words on the screen  Look under Navigator to the right, and click on glogster  Read through the directions and example on this webpage |  | -Once my students felt comfortable navigating around my website, I gave them the directions below for setting up a Glogster account:  **Directions for Setting up a Glogster Account**  Go to the website <http://www.glogster.com/>  Click on Log In in the upper right hand corner.  Enter you nickname and password.  Once you are in on your page, change the name to be your name (first and last).  Use this 90 second youtube video to help you navigate around glogster. For each part, go back to youtube to find how to navigate around.  <http://www.youtube.com/watch?v=MvC47fUANLk>  -Final Glog complete (Students have followed rubric).   * \_\_\_\_\_\_\_\_\_\_\_\_\_ I have a title for my web page that is creative and spelled correctly. * \_\_\_\_\_\_\_\_\_\_\_\_ I have put 12 words on this page using notes or text. All the spelling of these words is correct. These words have something to do with the water cycle, weathering, erosion, Earth surface, or Earth’s interior. * \_\_\_\_\_\_\_\_\_\_\_\_ I have chosen 6 of the words above to define on the web page and all spelling is correct. * \_\_\_\_\_\_\_\_\_\_\_\_ I have chosen 4 pictures illustrating 4 of the 12 words above. These pictures show clearly what the word means and are labeled on the web page. * \_\_\_\_\_\_\_\_\_\_\_ I added creative décor to the web page. It is colorful and interesting to look at. The space on the page is utilized meaning there are no empty spaces making it look like something is needed. All the text is easy to read. * \_\_\_\_\_\_\_\_\_\_\_ I have put my first and last name on the web page. |
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| **Summary of Differentiation Strategies and Students** |  | **Summary of Research Based Instruction Strategies** |
| Individual differentiation for each kid will be included in the assignment grade.  Differentiation for the project was included for each student. I monitored which students needed differentiation on the work itself. Some students were instructed to do the bare-minimum of the work on the rubric, while others were expected to go above and beyond. These students were guided with; imbedding videos, animations, and searching other sites for pictures and text. |  | According to the article, “Using Technology to Enhance Engaged Learning for At-Risk Student,” technology based learning helps students to achieve higher level thinking and skills. Technology based instruction, also allows students to get more meaningful lessons. When students are engaged, they will retain more from the lesson and learning. Technology is a huge part of our student’s lives, and it is important that we use types of technology that can help them achieve these higher order skills that can help them in the real world.  Citation:  "Using Technology to Enhance Engaged Learning for At-Risk Students." Web. 19 Jan. 2011. <http://www.ncrel.org/sdrs/areas/issues/students/atrisk/at400.htm>. |

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| **Technology Materials and Resources** |  | **Other Materials and Resources** |
| -Glogster  -http://santorosciencerocks.pbworks.com  (pbworks)  Teacher Resources: The ISTE NETS and Performance Indicators for Teachers (NETS – T)  Standard 1: Facilitate and Inspire Student Learning and Creativity- Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments.   1. Promote, support, and model creative and innovative thinking and inventiveness 2. Engage students in exploring real-word issues and solving authentic problems using digital tools and resources. 3. Promote student reflection using collaborative tools to reveal and clarify students’ conceptual understanding and thinking, planning, and creative processes. 4. Model collaborative knowledge construction by engaging in learning with students, collogues, and others in face-to-face and virtual environments.   Standard 2: Design and Develop Digital-Age Learning Experiences and Assessments-Teachers design, develop, and evaluate authentic learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the NETS – S Teachers:   1. Design or adapt relevant learning experiences that incorporate digital tools and resources to promote students learning and creativity. 2. Develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress. 3. Customize and personalize learning activities to address students’ diverse learning styles, working strategies, and abilities using digital tools and resources.   d. Provide students with multiple and varied formative and summative assessments aligned with content and technology standards and use resulting data to inform learning and teaching.  Standard 3: Model Digital-Age Work and Learning- Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.   1. Demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations. 2. Collaborate with students and peers using digital tools and resources to support students’ success and innovation. 3. Communicate relevant information and ideas effectively to students, parents, and peers using a variety of digital-age media and formats. 4. Model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning.   Standard 4: Promote and Model Digital Citizenship and Responsibility- Teachers understand logical and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices. Teachers:   1. Advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources. 2. Address the diverse needs of all learners by using learner-centered strategies and providing equitable access to appropriate digital tools and resources.   5. Engage in Professional Growth and Leadership  Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources. Teachers:   1. Participate in local and global learning communities to explore creative applications of technology to improve student learning.   c. Evaluate and reflect on current research and professional practices on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning.  d. Contribute to the effectiveness, vitality, and self-renewal of the teaching profession and of their school and community. |  | -Inside Earth Textbooks  -Environmental Science Textbooks  -Earth’s Changing Surface Textbooks  -Notes, Guided Reading, TAG’s throughout Earth System’s unit.  -Unit Vocabulary  -Earth Systems Quiz  -Earth Systems Test |

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| **Student Self-Assessment Strategies** |  | **Student Goal Setting Strategies** |
| -Students use rubric to self-assess as they complete their outline for their Glog, and complete their Glog. Students came up with 12 vocabulary words from their textbooks, notes, or worksheets from the Earth Systems unit. They checked off pieces of the rubric as they completed each section. |  | -Students look at examples and use rubric to complete the assignment.  -I met with each student individually and discussed with them, the outline of how their Glog pages would look.  -Students brainstormed design for their Glog pages before beginning the actual assignment. |

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| **Tier 1 Interventions (Universal) and Students** |  | **Strategically Planned Questions** |
| This activity was used as a differentiation tool as well as an extension for my first period class. This particular group of students are ahead of the other classes, and needed an extension project for the end of this unit.  This project was designed as a comprehensive end of unit evaluation tool. |  | \*How do forces inside Earth and on the surface build, destroy, and change Earth’s crust?  \*How does Earth’s surface change over time?  \*What twelve vocabulary words will you chose to use on your Glog page?  \*How do these twelve words fit the theme of the Earth Systems unit?  \*Why did you choose these particular twelve words? Do they fit a common theme?  \*How will you work to get this project completed on your own time?  \*What resource tools, besides your textbook and notes, will you use to complete this project? |

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| **Tier 2 Interventions (Targeted) and Students** |  | **Vocabulary** |
| As a tier 2 intervention, students were targeted to extend their vocabulary. The minimum amount of vocabulary words used on individual Glogs was twelve. Some students were pushed to exceed the minimum of twelve vocabulary words. The minimum vocabulary words to be defined were six words. Targeted students were expected to define more then the minimum of six vocabulary words. Only four pictures were needed illustrating four vocabulary words. Several students were pushed to exceed the four minimum count. Many students also choose to imbed video onto their Glogs. By integrating video images of vocabulary words, students were able to connect these Earth Science terms to the real world. |  | Earth Science Vocabulary:  Water Cycle, Geology, Theory, Fact, Continental Drift, Plate Tectonics, Pangaea, Continent, Crust, Mantle, Core (inner and outer), lava, magma, Convergent plate boundary, divergent plate boundary, Elevation, Hydrosphere, Atmosphere, Lithosphere, Topography, Mountain, Plateau, Mass Movement (landslide, mudslide, creep, slump), Earthquake, Tsunami, Tributary, Rill, Gulley, Delta, River, Stream, Erosion, Weathering, Flood plain, Oxbow lake, Meander, Groundwater, Earth’s Crust |

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| **Tier 3 Interventions (Intensive) and Students** |  | **ELL Strategies** |
| For advanced students, expectations are to exceed the expectation of the rubric. These students are expected to include more then twelve vocabulary words, more then six definitions, and more then four pictures.  For struggling students, modifications are made. Students that may struggle with this assignment have reductions to the rubric. These students may also have extended time for completing the assignment. |  | Written directions, oral directions, and web directions on my website <http://santorosciencerocks.pbworks.com/w/page/34811999/Glogster>  are given to help these students navigate around the project. An example is given on my website as well, and step by step directions were demonstrated during class. |

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|  | Activities and Lesson Procedures | Pacing |
| **Motivation (hook)** | Web Design! Who has every created or designed a web page? Well here is your chance to show what you know about Earth Systems on your very own web page. |  |
| **Introduction** | Objective: I can design a web page to review Earth system vocabulary, and explain what these vocabulary words mean.  Warm up: Create a word splash with the word Earth System in the middle. (students put the words “Earth Systems” in the middle of their warm-up page, and splash any vocabulary words that come to mind, around this vocabulary term. |  |
| **Direct Teaching** | Santorosciencerocks directions: We went to the computer lab several times before this lesson so that the students could become familiar with my website santorosciencerocks.pbworks.com. The students were instructed to navigate around the page, and find specific information. Once they began navigating around my webpage on their own, I figured it was time we begin the Glogster lesson.  Glogster Directions: First, students looked at my Glog as an example. <http://santoroscience.edu.glogster.com/earth-systems-/>  Secondly, students came up with twelve Earth systems vocabulary words that they have used during this unit. They wrote these words on a rough draft, and then defined six of them. Then, the students sketched images of four pictures that they wanted to use to describe their Earth System vocabulary. I checked each students progress, and met with each student to make sure the vocabulary was correct, and to discuss how they wanted their Glogs to look. |  |
| **Guided Practice** | Students were given a direction sheet explaining how to navigate around santorosciencerocks.pbworks.com and Glogster. The directions gave them their individual nicknames (usernames) and passwords to log onto their Gogster accounts under their names. |  |
| **Feedback** | Daily feedback is given to individual students. The Glogster rubric also acts as a feedback tool allowing students to criticize their own projects and make improvements accordingly. |  |
| **Independent Practice** | Students are given four days in the computer lab to work on their Glogs, and many of them were able to find time at home, during study skills, before, or after school to complete this assignment. After looking at the rubric, example, and giving oral directions and support, students worked on there Glogs independently. Many students discovered new tools using the Glogster website, and were very helpful in showing other students how to use these tools as well. |  |
| **Closure** | Students published their Glogster pages, and presented them to the class. Students were to choose three main points of interest to address in their presentation to the class.  Students were graded according to the rubric given to them at the beginning of the project. |  |